

Engineering Statement  
**Los Angeles Television Station KCAL LLC**  
KCAL-TV(Aux) Los Angeles, California  
Facility ID 21422  
Ch. 9 10.5 kW 899 m

Los Angeles Television Station KCAL LLC (ViacomCBS) seeks a Construction Permit for an auxiliary antenna system for KCAL-TV Los Angeles, CA. The proposed facility would utilize an existing, horizontally polarized antenna system with a height 899 meters above average terrain (HAAT) and an effective radiated power (ERP) of 10.5 kW.<sup>1</sup> This Statement addresses allocations, environmental, and radiofrequency factors related to this proposal.

The attached coverage map **Figure 1** demonstrates compliance with FCC Rule §73.1675.<sup>2</sup> The only land-based area where the proposed service contour extends beyond that of the main KCAL-TV antenna is a de minimis, uninhabited portion of Middle Anacapa Island, a state-regulated, marine conservation area. If a waiver is necessary, one is respectfully requested.<sup>3</sup>

A search of the FCC's CDBS database shows no AM broadcast stations within three kilometers of the proposed facility, so FCC Rule §1.30002 is not triggered. The nearest FCC monitoring station is 511 km distant at Livermore, CA, well beyond the protection radius specified in §73.1030(c). Thus, it is believed that the proposed facility satisfies all allocation matters.

The proposed facility uses an existing tower with no change in overall height, marking specifications, or lighting specifications.<sup>4</sup> Since an existing antenna will be used, no actual construction is proposed, categorically excluding this application from environmental processing.

---

<sup>1</sup> See FCC file numbers BXLCT-20000926ABQ and BXPCT-20000215ABL.

<sup>2</sup> See FCC file number BLCDT-20090612AIY. §73.1675 specifies an analysis of Grade B contours. Because "Grade B" is not defined for DTV stations, **Figure 1** provides dipole-corrected 36 dBμ contours instead.

<sup>3</sup> The only non-directional alternative is to reduce ERP to 9 kW, which would greatly reduce the efficacy of the auxiliary antenna and would therefore not be in the public interest.

<sup>4</sup> See Antenna Structure Registration 1007719.

Engineering Statement  
**Los Angeles Television Station KCAL LLC**

The proposed operation was evaluated for human exposure to radiofrequency energy using equation ten (10) from the Commission's OET Bulletin No. 65. The existing antenna is located 50.6 meters above ground level and will have a maximum effective radiated power of 10.5 kilowatts, horizontally polarized. Pursuant to FCC guidance, a conservative relative field factor of 0.2 in downward directions was used for purposes of this calculation.<sup>5</sup>

Calculations show that the proposed facility would contribute a power density of 5.9  $\mu\text{W}/\text{cm}^2$  at two meters above ground level near antenna support structure, or 3.0 percent of the FCC's 200  $\mu\text{W}/\text{cm}^2$  "uncontrolled/general population" exposure limit for VHF Channel 9 (189 MHz). RF power density is expected to be even lower at ground level locations away from the base of the tower, due to the increasing distance from the transmitting antenna.

According to §1.1307(b)(3), facilities at locations with multiple emitters are categorically excluded from responsibility for taking corrective action in areas where their contribution is less than five percent of the limit. Since the calculated exposure is less than five percent at all ground level areas, the impact of other possible contributors should not be a factor.

ViacomCBS participates in a site RF exposure program with other Mount Wilson broadcasters. A site exposure policy is in effect that includes restriction of access, power reduction, or the complete shutdown of facilities when work must be performed in areas with predicted or measured RF levels in excess of the appropriate general public and occupational guidelines. Tower access will continue to be controlled and appropriate RF exposure warning signs will continue to be posted.

---

<sup>5</sup> FCC Office of Engineering and Technology (OET) Bulletin 65 Edition 97-01 Supplement A (1997). *Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*, page 29.

KCAL-TV(Lic) Main Facility  
FCC File BLCDT-20090612AIY  
36 dBμ F(50, 90) Service Contour

Figure 1  
Proposed Facility Coverage Contours  
KCAL-TV(Aux) Los Angeles, CA  
Los Angeles Television Station KCAL LLC  
Facility ID 21422  
Ch. 9 10.5 kW 899 m

KCAL-TV Proposed Aux Facility  
36 dBμ F(50, 90) Service Contour

Anacapa Islands  
(See Text)

